COS1004 Computer Systems Assignment 2 Part B

James Hassall, 102100517, COS10004

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Introduction

I am trying to make the classic Rock, Paper, Scissors (RPS) game in assembly. I initially tried to make a calculator in assembly but realise the time to implement such an application is too long. I decide to make RPS becasue I could make it realitively easy, where there are two inputs and 3 outputs (including the screen). The users makes a selection either Rock, Paper or no button down for Scissors, then the computer will make a decision after 4 seconds and and display its answer. An indicator LED will light up red or green depending if the player lost or won respectively.

Design Outline

Physical components of the build was 2 10k ohm resistors, 2 1k Ohm resistors, 2 buttons, 2 LED's and a lot of wiring, the physical setup of the system is realitively easy due to the simplicity of the hardware. The software components was written in FASM becasue that is what I have been taught. The functions I have created are the 3 different actions Rock, Paper and Scissors where they link up to a created function called DrawChars (located in DrawChar.asm) which will handle the drawing of the characters on to the display. I have also created a new fucntion for the Drawing the AI's selection to the screen as well as writing the gameplay loop where the ai creates a psuedo random number between 0-2 which is Rock, Paper or Scissors respectively. Then picks one and its compared to the users output.
The way the

Assumptions

I have assumed that using the GPIO reference doc that was in the earlier labs was fair to use.

Unresolved Problems

As of current build the Ai only ever chooses Scissors and therefore the user can always win.

Running Program